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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,375	01/04/2001	Eckhard Puerkner	646-115	4059
423	7590	10/22/2003	EXAMINER	
HENKEL CORPORATION 2500 RENAISSANCE BLVD STE 200 GULPH MILLS, PA 19406			GOFF II, JOHN L	
			ART UNIT	PAPER NUMBER
			1733	18

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.	Applicant(s)	
09/700,375	PUERKNER ET AL.	
Examiner	Art Unit	
John L. Goff	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 01 August 2003.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1,13-15,18,26,28-30 and 32-54 is/are pending in the application.

4a) Of the above claim(s) 38,43,48 and 54 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,13-15,18,26,28-30,32-37,39-42,44-47 and 49-53 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)                    4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)                    5) Notice of Informal Patent Application (PTO-152)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.                    6) Other:

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/1/03 has been entered. In view of applicants amendments and arguments the previous rejections including the 35 USC 112 rejections are withdrawn and new rejections are set forth below.

***Election/Restrictions***

2. Newly submitted claims 38, 43, 48, and 54 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:  
Previously at least claim 18 required a nonionic polyurethane.  
  
Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 38, 43, 48, and 54 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Objections***

3. Claims 28-30 are objected to because of the following informalities: Claims 28-30 should be amended to depend from claim 26, and claim 51 should be amended to depend from claim 49. Appropriate correction is required.

***Claim Rejections - 35 USC § 102/103***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1733

7. Claims 1, 13-15, 18, 26, 28-30, 32-37, 39-42, 44-47, and 49-53 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fischer et al. (WO 94/13726 with U.S. Patent 6,339,735 used as a translation).

Fischer et al. disclose water-soluble hot melt adhesives comprising one or more nonionic polyurethanes useful for bonding together paper, wall coverings, labels, etc (Column 2, lines 37-40 and Column 3, lines 12-13 and Column 6, lines 1-5). Fischer et al. teach the polyurethane hot melt adhesives comprise at least one polyisocyanate (NCO-terminated oligomer), e.g. tetramethyl xylylene diisocyanate (TMXDI), and a polyol, e.g. polyethylene glycol (polyalkylene glycol) or copolymer of ethylene oxide (polyalkylene oxide), and Fischer et al. teach the polyurethane may further comprise hydrophobic diols, e.g. 1, 10-decanediol, 1,12-dodecanediol, etc., or amines (Column 3, lines 18-65 and Column 4, lines 1-54 and Column 5, lines 1-25 and the examples). Fischer et al. teach the polyurethane adhesives have a molecular weight greater than 10,000, melt viscosities greater than 700 mPas, and a crystallinity of at least 20% of the value measured for polyethylene glycol with a molecular weight of 6,000 (Column 2, lines 45 and 60-64 and Column 5, lines 54-62).

Regarding claims 1, 14, 26, and 29, Fischer et al. are silent as to measuring all specific properties of the adhesives such as solubility, upper cloud point, and open time. However, it is noted that at least the first example taught by Fischer et al. teach a polyurethane adhesive comprising the same materials, i.e. polyethylene glycol and TMXDI, as the example taught in applicants specification such that it appears it would intrinsically flow that the polyurethane hot melts taught by Fischer et al. have the claimed values for the specific adhesive properties. Furthermore, it is noted Fischer et al. teach a number of polyisocyanates and polyols that

Art Unit: 1733

correspond with those taught by applicant (See Column 3, lines 12-67 and Column 4, lines 1-54 of Fischer et al. and page 10-13 of applicants specification) such that one of ordinary skill in the art at the time the invention was made would have readily expected that the polyurethane hot melt adhesives taught by Fischer et al. would have intrinsically had the specified properties. It should be noted that the office is not equipped to perform processes of the prior art and obtain products and test the same. Applicant is advised that as such there appears to be sufficient evidence provided to shift the burden upon applicant to test to show that the prior art composition does not possess the related properties.

Regarding claims 39, 40, and 44, Fischer et al. teach using the water-soluble hot melt adhesive to bond together paper which would have encompassed hygiene papers such as paper towels. In any event, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the water-soluble hot melt adhesive taught by Fischer et al. to bond hygiene papers together as Fischer et al. are generally directed to the bonding of paper and only the expected results would be achieved.

***Claim Rejections - 35 USC § 103***

8. Claims 1, 13-15, 18, 26, 28-30, 32-37, 39-42, 44-47, and 49-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (Specification pages 1-3) in view of either one of Fischer et al. or Chem KK (JP 54-1347 and the English translation).

The admitted prior art discloses it is well known in the art to bond together hygiene papers using a water-soluble adhesive. The admitted prior art teaches that while it is advantageous/desirable for the adhesive to be completely water-soluble, the admitted prior art is

Art Unit: 1733

silent as to a particular adhesive that is completely water-soluble (Page 1, lines 22-26 and Page 2, lines 1-5 and 19-30 and Page 3, lines 1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the water soluble adhesive taught by the admitted prior art any of the well known and conventional adhesives in the art that are completely water soluble such as those suggested by either one of Fischer et al. or Chem KK as only the expected results would be achieved.

Regarding claims 1, 14, 15, 26, 29, and 30, the admitted prior art as modified by either one of Fischer et al. or Chem KK are silent as to measuring all specific properties of the adhesives such as solubility, upper cloud point, and open time. However, it is noted that at least the first example taught by Fischer et al. teach a polyurethane adhesive comprising the same materials, i.e. polyethylene glycol and TMXDI, as the example taught in applicants specification such that it appears the polyurethane hot melts taught by the admitted prior art as modified by Fischer et al. have the claimed values for the specific adhesive properties. Furthermore, it is noted both Fischer et al. and Chem KK teach a number of polyisocyanates and polyols that correspond with those taught by applicant (See Column 3, lines 12-67 and Column 4, lines 1-54 of Fischer et al. and Page 2, lines 16-20 and Page 3, lines 1-7 of Chem KK English translation and page 10-13 of applicants specification) such that one of ordinary skill in the art at the time the invention was made would have readily expected that the polyurethane hot melt adhesives taught by the admitted prior art as modified by either one of Fischer et al. or Chem KK would have intrinsically had the specified properties. It should be noted that the office is not equipped to perform processes of the prior art and obtain products and test the same. Applicant is advised

Art Unit: 1733

that as such there appears to be sufficient evidence provided to shift the burden upon applicant to test to show that the prior art composition does not possess the related properties.

Fischer et al. disclose water-soluble hot melt adhesives comprising one or more nonionic polyurethanes useful for bonding together paper, wall coverings, labels, etc (Column 2, lines 37-40 and Column 3, lines 12-13 and Column 6, lines 1-5). Fischer et al. teach the polyurethane hot melt adhesives comprise at least one polyisocyanate (NCO-terminated oligomer), e.g. tetramethyl xylylene diisocyanate (TMXDI), and a polyol, e.g. polyethylene glycol (polyalkylene glycol) or copolymer of ethylene oxide (polyalkylene oxide), and Fischer et al. teach the polyurethane may further comprise hydrophobic diols, e.g. 1, 10-decanediol, 1,12-dodecanediol, etc., or amines (Column 3, lines 18-65 and Column 4, lines 1-54 and Column 5, lines 1-25 and the examples). Fischer et al. teach the polyurethane adhesives have a molecular weight greater than 10,000, melt viscosities greater than 700 mPas, and a crystallinity of at least 20% of the value measured for polyethylene glycol with a molecular weight of 6,000 (Column 2, lines 45 and 60-64 and Column 5, lines 54-62).

Chem KK disclose completely water-soluble hot melt adhesives comprising one or more nonionic polyurethanes useful for bonding together cotton, jute, cloth, etc. Chem KK teach the polyurethane hot melt adhesives (molecular weight greater than 7,000) comprise at least one polyisocyanate (NCO-terminated oligomer), e.g. trimethyl hexamethyl diisocyanate, and a polyol, e.g. polyoxyalkylene glycol (polyalkylene glycol) having a molecular weight of 400-10,000, and Chem KK teach the polyurethane may further comprise hydrophobic diols, e.g. propylene glycol, or monofunctional amines (Page 2, lines 12-20 and Page 3, lines 15 and the example).

***Response to Arguments***

9. Applicant's arguments with respect to claims 1, 13-15, 18, 26, 28-30, 32-37, 39-42, 44-47, and 49-53 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues Chem KK does not suggest a process for the production of at least two-ply paper laminates comprising one or more polyurethanes having the limitations required by claim 1. It is noted the admitted prior art has been cited to show the well known technique of bonding together hygiene paper laminates using a water-soluble adhesive such that it would have been obvious to one of ordinary skill in the art to use the completely water-soluble adhesive taught by Chem KK to bond the paper laminates taught by the admitted prior art as only the expected results would be achieved. As to the particular properties required by claim 1, the admitted prior art as modified by Chem KK are silent as to measuring all specific properties of the adhesives such as solubility and upper cloud point. However, it is noted Chem KK teach a number of polyisocyanates and polyols that correspond with those taught by applicant (See Page 2, lines 16-20 and Page 3, lines 1-7 of Chem KK English translation and page 10-13 of applicants specification) such that one of ordinary skill in the art at the time the invention was made would have readily expected that the polyurethane hot melt adhesives taught by the admitted prior art as modified by Chem KK would have intrinsically had the specified properties. It should be noted that the office is not equipped to perform processes of the prior art and obtain products and test the same. Applicant is advised that as such there appears to be sufficient evidence provided to shift the burden upon applicant to test to show that the prior art composition does not possess the related properties. Applicant further argues Chem KK does not teach the limitations required by claims 32 and 35. Regarding claim 32, Chem KK teaches the polyurethane hot melts may

Art Unit: 1733

include hydrophilic diols such as polypropylene glycol (Page 3, lines 1-12). Regarding claim 35, Chem KK teaches the polyurethane hot melts may include isocyanates (NCO-terminated oligomers) and monofunctional amines, e.g. monoethanol amine (Page 3, lines 1-12).

*Conclusion*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481** (after December 2003 the telephone number will be 571-272-1216). The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
John L. Goff

  
JEFF H. AFTERGUT  
PRIMARY EXAMINER  
GROUP 1300